

WHAT IS CLAIMED IS:

1. A communication apparatus having a plurality of input and output ports to be connected to a plurality of types of networks, comprising:

5 means for discriminating the type of an incoming network of a connection setup request when the connection setup request is received from any one of said input ports and ; and

10 means for selecting an outgoing network in said connection setup request on the basis of a predetermined rule, and transferring the connection setup request to an output port connected to said outgoing network after rewriting a part of the connection setup request.

15 2. A communication apparatus having a plurality of input and output ports to be connected to a plurality of types of networks, comprising:

means for discriminating an incoming network of a received message when the message is received from one of
20 said input ports; and

means for selecting an outgoing network of said received message on the basis of a predetermined rule, and transferring the received message to an output port connected to said outgoing network after rewriting a part of the
25 received message.

3. A communication apparatus having a plurality of input and output ports to be connected to a plurality of types of networks, comprising:

5 first means for discriminating an incoming network of a received message when the message is received from one of said ports; and

second means for selecting an outgoing network of said received message on the basis of a predetermined rule, and
10 transmitting said received message to an output port connected to said outgoing network after selectively rewriting the contents of a first address field and a second address field in the received message.

15 4. A communication apparatus according to claim 3, wherein when the incoming network of said received message is a network of a first type and an outgoing network is a network of a second type, said second means sends out said received message to an output port connected to said outgoing
20 network after writing the contents of said first address field into said second address field and an address corresponding to the network of the second type obtained on the basis of said predetermined rule into said first address field.

5. A communication apparatus according to claim 3,
wherein when an incoming network and an outgoing network
of said received message are networks of a first type, said
second means sends out said received message to an output
5 port connected to the outgoing network by using the contents
of said first address field.

6. A communication apparatus according to claim 3,
wherein when the incoming network of said received message
10 is a network of a first type and the outgoing network is
a network of a third type, said second means writes an address
corresponding to the network of the third type obtained on
the basis of the predetermined rule into said first address
field, and sends out the received message to an output port
15 connected to the outgoing network.

7. A communication apparatus according to claim 3,
wherein when the incoming network of said received message
is a network of a third type and the outgoing network is
20 a network of a first type, said second means sends out said
received message to an output port connected to the outgoing
network by using the contents of said first address field.